

ABSTRACT

There is provided a semiconductor testing apparatus comprising a current measuring portion which
5 converts a load current quantity at the time of application of a relatively high test voltage to a DUT to fall within a low-voltage range, and then subjects the low-voltage range to quantization conversion with a predetermined measurement resolution even when the
10 relatively high test voltage is applied to the DUT. This is a differential voltage measuring apparatus comprising: an applied voltage source which applies a predetermined constant voltage to a load device; current/voltage converting means for directly inserting a predetermined
15 resistance between an output end of the applied voltage source and the load device, and converts a quantity of a current flowing through the load device into a voltage; and current measuring means which switches and receives a common mode voltage and a detection voltage in time
20 series, shifts the received voltages to predetermined low voltages, and outputs low-voltage measurement data obtained by receiving each of the shifted voltages and subjecting this voltage to quantization conversion.